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Delaval, Jan

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Sent: Friday, February 06, 2004 12:18 PM
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Subject: Search request; 10/074679

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Jan,

Please search claims 1 with a look at claims 2-11 which clarify the issue.

1. A method for generating a protozyme (or enzyme) , said method comprising'.
a) identifying a suitable protein scaffold lacking a desirable enzyme-like activity;
b) inputting a protein backbone structure of said protein scaffold into a computer, wherein said backbone structure has variable residue positions ;
c) inserting an active site domain into said scaffold;
d) applying at least one protein design cycle; and
e) generating a set of candidate variant proteins with putative enzyme-like activity.

2. A method according to claim 1 wherein said insertion step is done at the same time as said protein design cycle.

3. A method according to claim 1 wherein said insertion step is done prior to said applying step.

4. A method according to claim 1 wherein said insertion step is done after said applying step.

5. A method according to claim 1 wherein said insertion step comprises the use of at least one high energy state rotamer.

6. A method according to claim 1 further comprising applying a second protein design cycle prior to said generating step.

7.A method according to claim 1 wherein said active site domain catalyzes a known enzymatic reaction.

8. A method according to claim 1 wherein said active site domain catalyzes an unknown enzymatic reaction.

9. A method according to claim 1 wherein said active site domain is a ligand binding domain.

10. A method according to claim 1 wherein said protein design cycle comprises a DEE computation

11. A method according to claim 1 wherein said protein design cycle includes the use of at least one scoring function.

Thanks a lot

Michael